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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,516	02/19/2002	Yoshihisa Yonezawa	YONE3009/EM	3425

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EXAMINER

DONG, DALEI

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 09/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/076,516

Applicant(s)

YONEZAWA ET AL.

Examiner

Dalei Dong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 18-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 25-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 10/076,516.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-17 and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,982,134 to Aono.

Regarding to claims 1, 3-4, 6-17 and 26-29, Aono discloses in Figures 3 and 4, "a cross sectional of an image display device according to a first embodiment of the present invention is shown. In the drawings, reference number 11 designates a conductive wire cathode (*at least one linear member provided above the base*) coated with barium oxide or another material having a thermionic emissions capability; 12a and 12b are insulated support frames positioned on both sides of back electrode 15 (*base*) and used to support and clamp both ends of wire cathodes 11; 13 is the control electrode used to control the electron beam emitted from the wire cathodes 11 to form the defined image; 14 is the fluorescent material which emits light and displays an image when the electron beam which has passed through the control electrode 13 collides into the fluorescent material 14; 15 is the back electrode, which is installed so that thermions can be easily emitted from the wire cathodes 11; 16a and 16b are the housing; 17a and 17b are the rod-shaped insulated members which determine the height of the wire cathodes 11; and 18 (*at least*

one metal film and at least one additional member) is the spring which applies a load and tension to the wire cathodes 11. For example, insulated support frames 12a and 12b and rod-shaped insulated members 17a and 17b are made of ceramics, back electrode 15, springs 18 and bottom portion 16b of the housing are made of metal, and cover portion 16a of the housing is made of glass" (column 4, line 9-33).

Aono also discloses in Figures 3 and 4, "wire cathodes 11 is supported by insulated members 17a and 17b so that the height of wire cathodes 11 is controlled by the diameter of insulated members 17a and 17b positioned on back electrode 15. Thus, a predetermined distance is provided between wire cathodes 11 and back electrode 15 and also between wire cathodes 11 and control electrode 13" (column 4, line 38-45).

Aono further discloses in Figures 3 and 4, "it should be noted that insulated members 17a and 17b are positioned outside the edges of the image display area (specifically fluorescent material 14), and inside of insulated support frames 12a and 12b. Grooves 19 are formed in insulated support frame 12b. Unlike the grooves provided in a conventional flat display device, these grooves 19 do not control both the height and wire cathode pitch, but controls only the wire cathode pitch. As a result, it is sufficient to manufacture the grooves to the required precision for the pitch between the cathode wires only, and manufacturing is therefore easier. Thus, it is not necessary to manufacture the grooves with a depth precision of within several microns. In other words, both the height and cathode pitch are controlled with sufficient precision, but by different means. Specifically, the height of the cathode wires is controlled by clamping the wire cathodes 11 in contact with the insulated members 17a and 17b, and the wire cathode pitch is

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controlled by the edge of the grooves. Furthermore, as shown in FIG. 4, because the position at which the wire cathodes 11 are clamped is at the face 20 of the spring 18, which is above groove bottom surface 19a, in other words, because wire cathodes 11 are not in contact with groove bottom surface 19a, the height and cathode pitch precision do not become misaligned. Moreover, because wire cathodes 11 are not in contact with groove bottom surface 19 a, the contact resistance can also be reduced. The wire cathodes 11 are suspended and secured with a predetermined tension applied by spring 18. In FIG. 4, reference number 20 shows the position at which the wire cathode 11 is clamped (*one end of the at least one linear member being disposed between the at least one additional member and at least one metal film*). The image display device is completed by assembling a control electrode 13 with the back electrode 15 assembled as thus described, and sealing the assembly in housing 16a and 16b" (column 4, line 46-68 to column 5, line 1-12).

Aono discloses the claimed invention except specifically disclose that the spring member is composed of two separate elements of at least one metal film and at least one additional member. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the spring member utilize two separate elements of at least one metal film and at least one additional member, since it has been held that constructing a formerly integral sturcutre in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Regarding to claims 2, 5 and 25, wherein the at least one linear member is fixed to the at least one metal film by welding is the method of forming a device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

Response to Arguments

3. Applicant's arguments with respect to claims 1-17 and 25-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

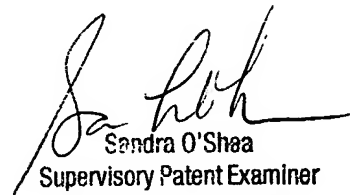
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (703)308-2870. The examiner can normally be reached on 8 A.M. to 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703)305-4939. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

D.D.
September 3, 2003



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800